Course Hero Design Challenge

Cloud Photo Management

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Process Overview and Timeline

1. Ask Question
2. Understand Interview Notes
3. Competitor Analysis
4. Research Synthesis

May 20

5. Second Round User Research
6. Initial Ideation

May 21

7. IA Design
8. Get Feedback
9. Iteration

June 1

10. Visual Design
11. High-fidelity Mock-ups
12. Prototype

June 2

13. Usability Test Plan
14. Documentation

June 3

FIRST ROUND RESEARCH

Understand the Problem Context and Scope

1

Ask Questions

The first brainstorming session of my process is always asking a lot of questions. Through asking a lot of questions and analyze them, I can discover what is the real problem. On the hand, as a UX designers, asking a lot “why” questions helps me to better understand users needs. On the other hand, asking questions help me to be aware of my own assumptions and be critical when I make decisions.

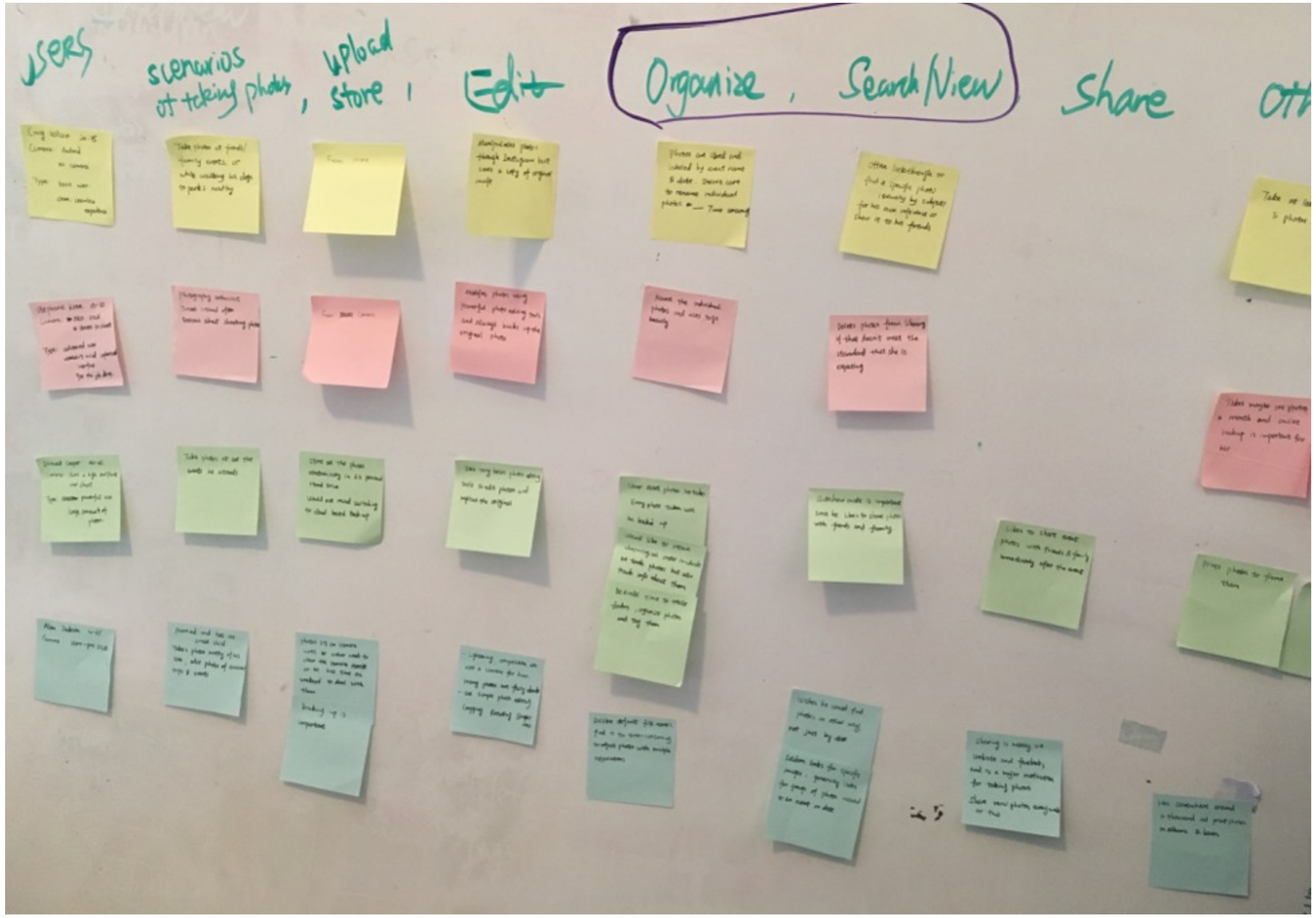
Questions I Asked

1. What are the scenarios that users use photo management application on phone? Where and When? What are their motivations?
2. As mentioned in the prompt, users can upload, edit, tag photos, due to the time limitation, where should I focus on?
3. Are there any similar products? How are they doing? Are there any issues that are not covered?
4. How do users manage their photos now? Do they use any similar products? What are their pain points?

2

Understand Users

Before ideation it is important to understand users needs. The prompt provides four user interviews. I wrote different users interview notes on different colored sticky notes and organized them according to different functions of photo organize application. This helps me to better understand what is the main pain point and what are the different needs of different users, so that I can balance and trade off when making decisions.



After doing an affinity diagram of the interview notes, I mapped out the basic functions and found that the most **common pain** point is that users need an efficient and effective way to **organize and search** photos but they all have **different** using **context** and **motivations** behind it.

3

Competitor Analysis

I conducted Competitive Analysis of similar to learn good and bad aspects and different trade offs with different products. This also helps me to understand current market place. What are the issues that these products didn't covered and identity potential market opportunity.

I chose Google Photo, Apple Photo, QuickPics, Slidebox according to online reviews. During the competitor Analysis, I tried these application, listed out their **main functions**, mapped out their **information architecture**, took notes of their **UI and IxD design**

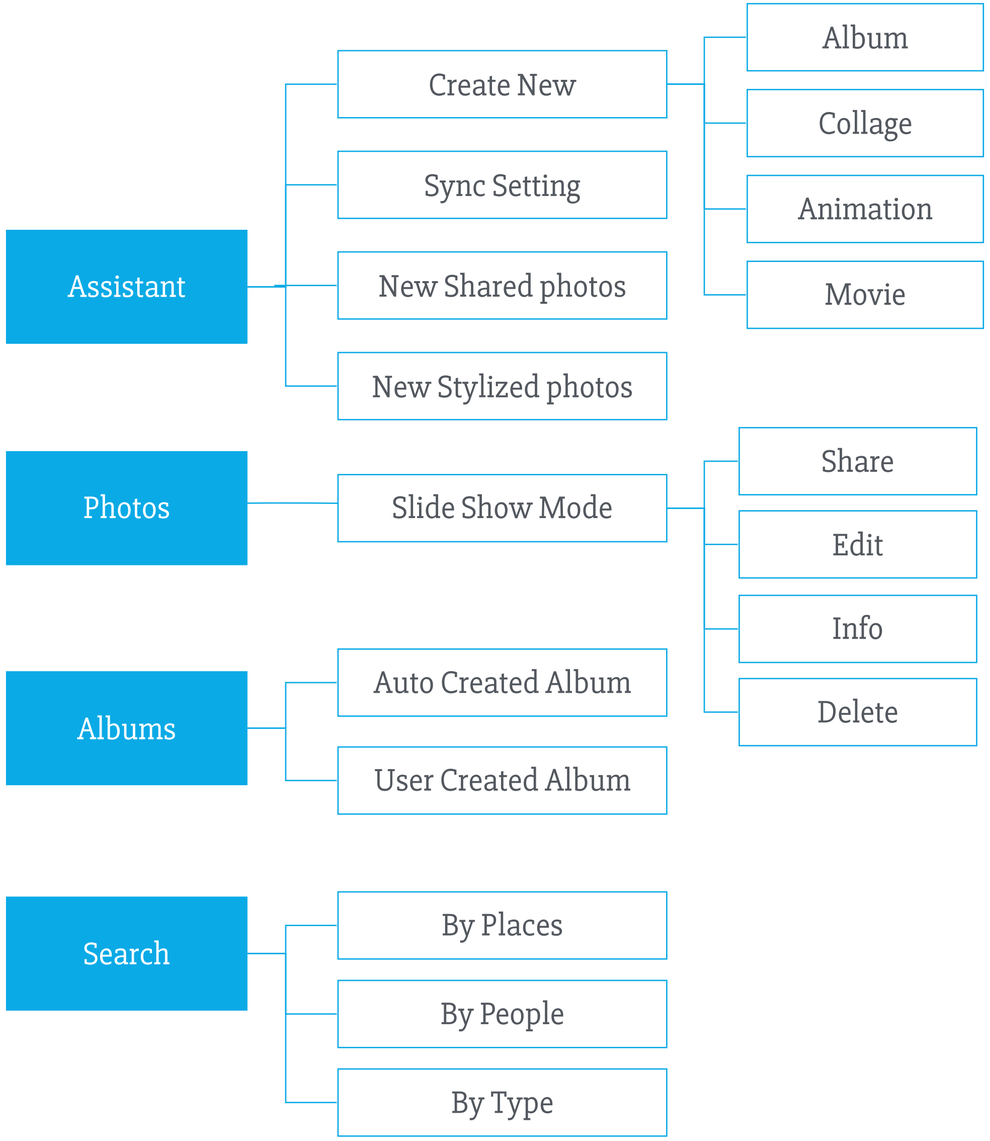
Google Photo

Apple Photo

Slidebox

Quickpics

Competitor Analysis - Google Photos



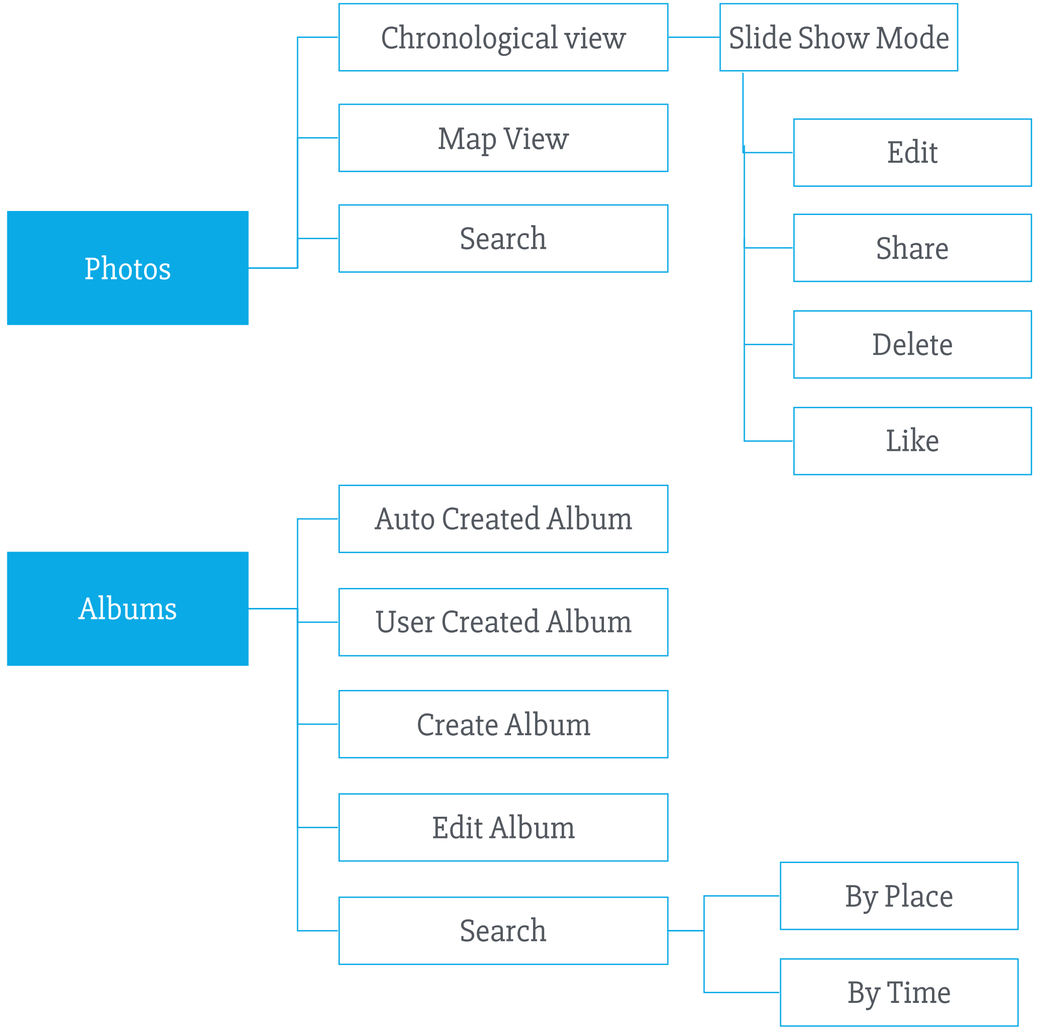
PROS

- Auto Back up
- Image Recognition: users are able to directly search subject in their photos
- Multiple search ways: places people
- Easy sharing: could share via links

CONS

- Information Architecture and tab labels are not clear enough for users
- Auto stylized photo and auto classification are not accurate for pro users
- Only one way to view photos.

Competitor Analysis - Apple Photo



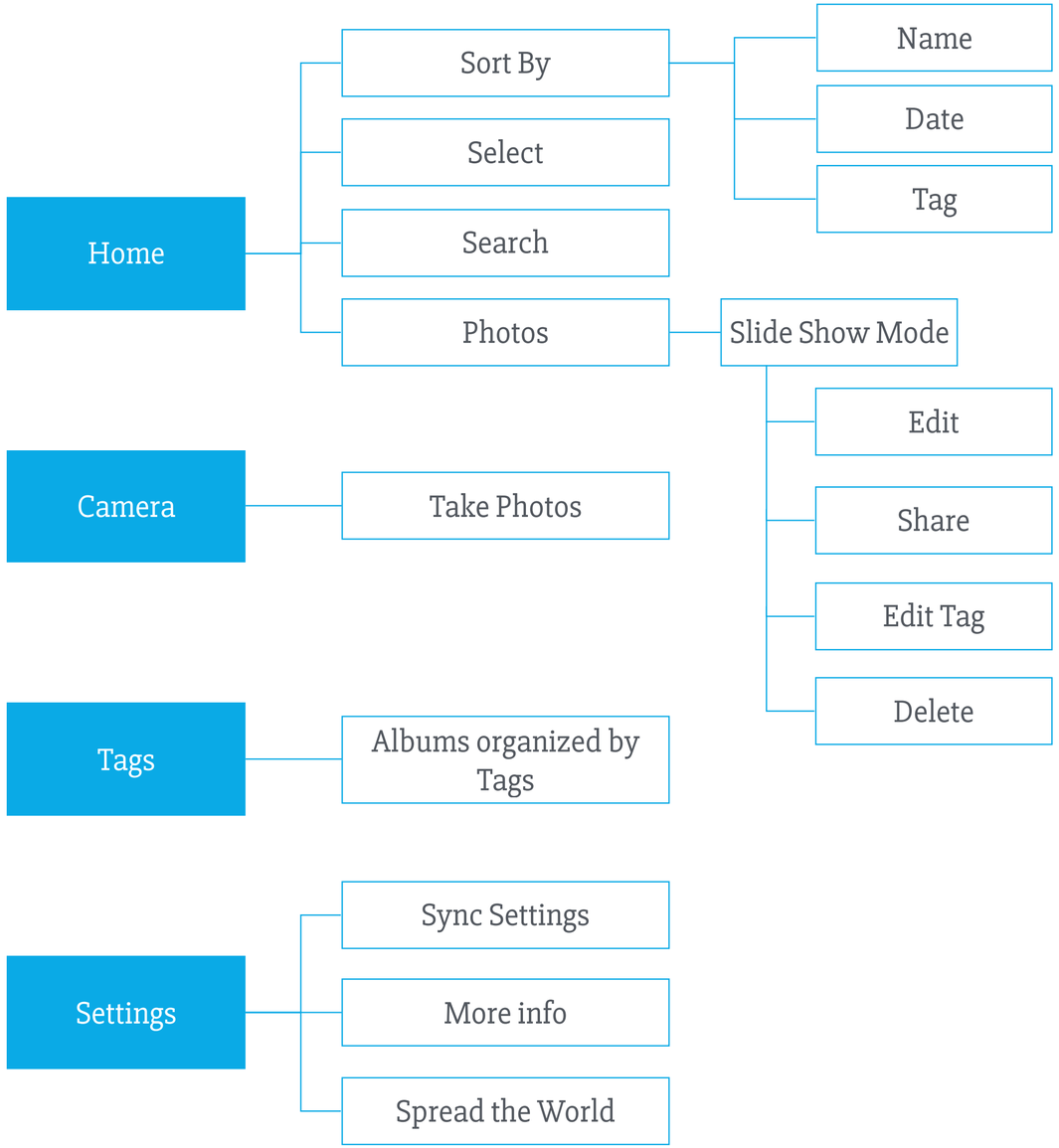
PROS

- Add geology information to each photo
- Map view is useful for users who like traveling
- Preview bar at the bottom of slideshow mode is easy for user to navigate through different photos
- Categorize photo into selfies screen shots, etc

CONS

- Different
- Search by time can only search by month
- Map view can only be accessed through the place tags and users can only view the certain area, they can't zoom in or zoom out.

Competitor Analysis - QuickPics



PROS

- The application provide user enough flexibility to organize photos
- Use tags to organize photos
- Multiple way to sort photos

CONS

- Renaming all photo names are time consuming
- “Home” and “Tags“ tab will switch to each other when users tabbing it.

Competitor Analysis - QuickPics

PROS

- Convenient and easy way to add photos into albums
- Use gesture to delete photos

CONS

- Only show unsorted photos. Users have to view other photos in albums
- Users can only put these photos into different albums, there is no more actions users can take
- Albums can't sync with local storage

4

Research Synthesis

After the interview notes analysis and competitor analysis, I synthesize all the information I had now, which can help me with initial ideation and identify where I should do further research. I listed out the research insights, generated some design guidelines and questions I need to ask during further research.

RESEARCH INSIGHTS

1. Different users have different habit of viewing and finding their photos like by trip and by events
2. Most users would like to do complex edition of the photos using third applications. They may do basic editing like rotate and crop in the photo management tool
3. Most users like to share photos with others
4. Sync and back up of photos are important. Many users have more than one devices
5. How to organize photos efficiently is not well designed by most of the application but it is important for users

DESIGN GUIDELINES

1. Provide different view mode according to different users' habit like map view or timeline view
2. Provide very basic edit tool instead of complex editing options
3. Provide convenient and easy way to share
4. Provide auto sync and back up between multiple devices

FURTHER QUESTIONS

1. How do users organize their photos currently? Are photo names necessary?
2. What functions are appropriate in mobile and what functions should be included in desktop version?

5

Further User Research

I also conducted two user interviews to better understand users' motivation and context of using mobile. I asked questions such as:

How do you organize photos currently? Can you walk me through it?
Do you use any photo management application? How does that help you?

Participant 1, 22-27, Male

He takes photos using his iPhone and camera. He uses Google Photo to help him **sync between his phone and laptop**. He doesn't name every individual photos because it's time consuming. But he used to do that because he though it is easier to find. He would use name the photos with same words but different number, like "Mountain1.jpg, Mountain2.jpg, Mountain3.jpg".

Participant 1, 22-27, Male

She takes photo using her iPhone and a DSLR . She currently uses Dropbox to backup her photos and sync between different devices. She will rename photos with **tags** so that it is easier to search. The most challenging part is that she has to **delete** a lots of photos which doesn't meet standard or **select** one or two from several photos. She will use her phone to get access to photos when she needs to share photos with friends.

DESIGN IDEATION

How To Solve Problems

6

Design Focus

Considering time and resource limitation, defining my design focus before moving to the ideation page is important because I can spend time and energy wisely.

Organize Photos
Efficient way to organize photos

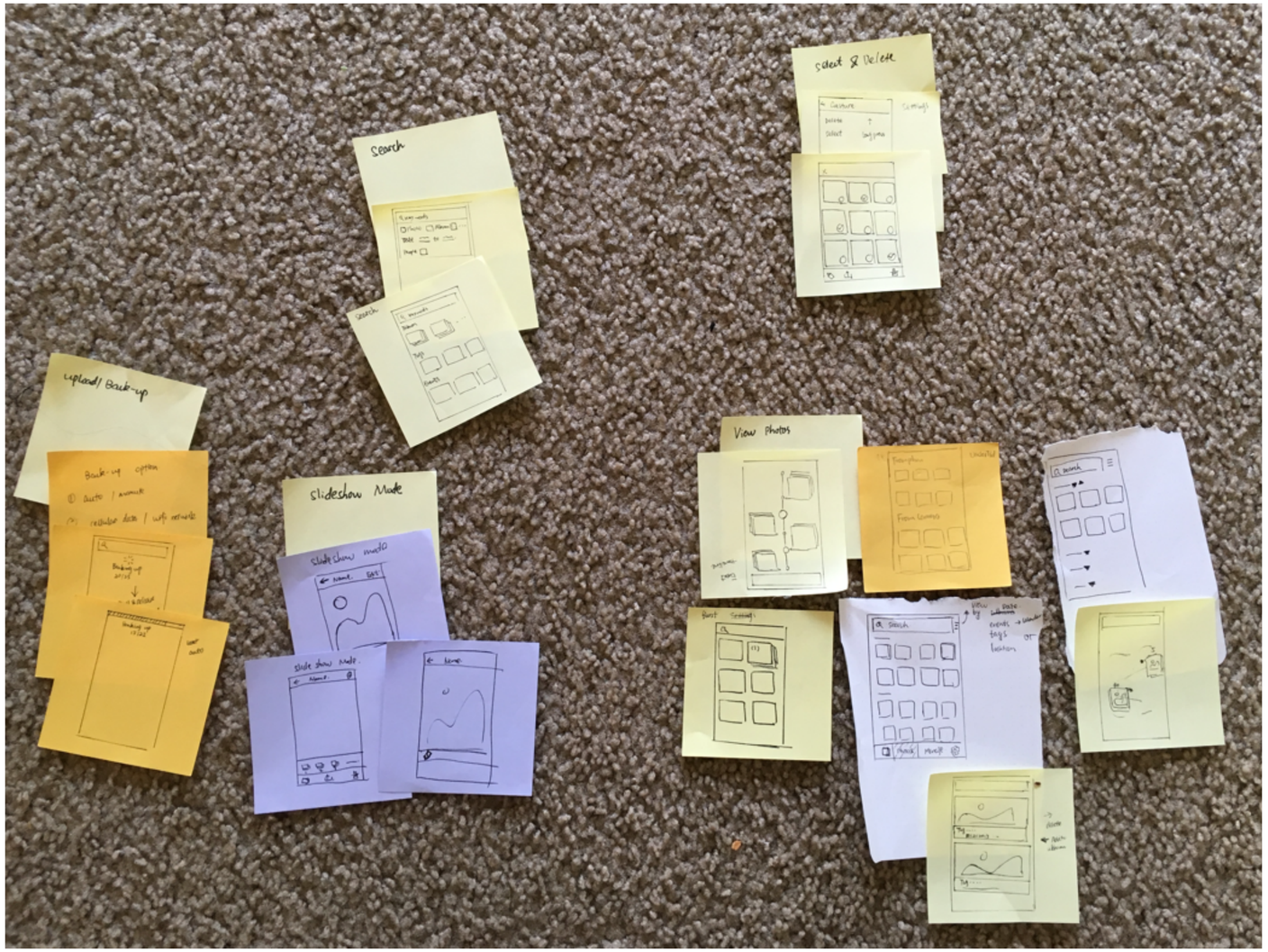
View and Find Photos
Meet the needs for different type of users to view their photos

Information Architecture
Provide clear IA so that users can navigate in the APP smoothly

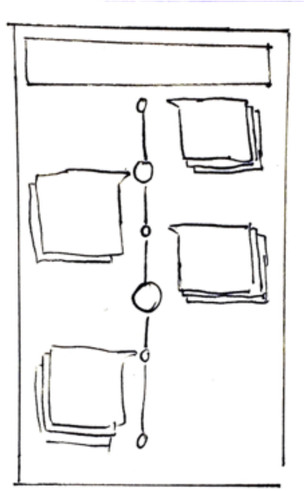
7

Initial Ideation

After several user interviews and competitor analysis, I started to sketch out ideas of main function so that I can balance and decide which one to choose according to the different context.

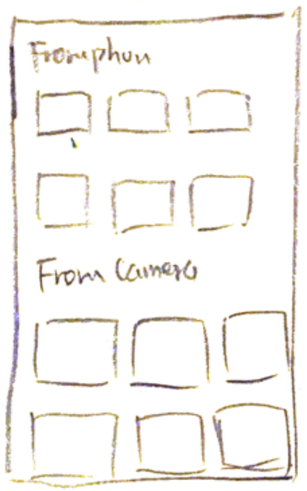


Initial Ideation - View Photos



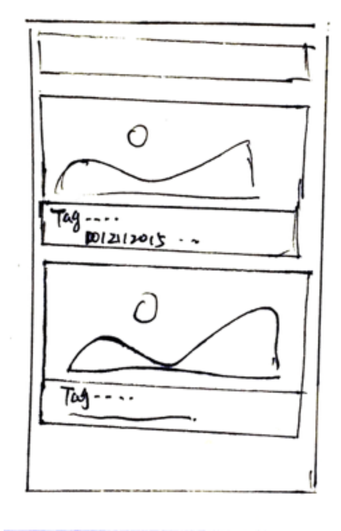
Timeline View

Pros: Photos are organized by events so that users can find view and share with friends easier
Cons: Can't view every photo with one glance



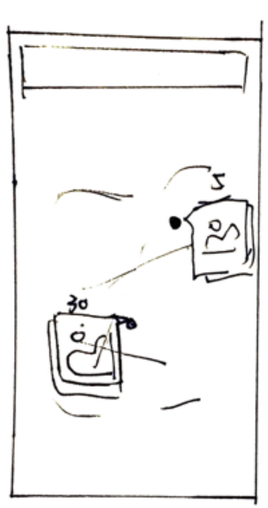
Device

Pros: It's easier for users who have multiple devices to organize their photos
Cons: Not useful for user who owns one device



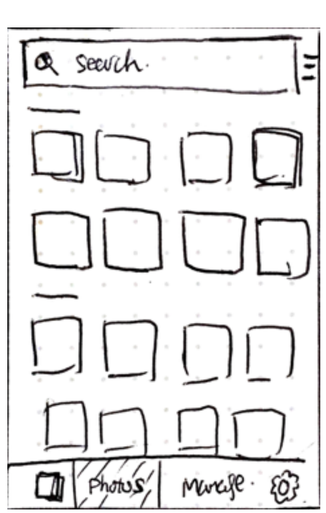
One Photo One Line

Pros: Users can view their photos without tapping on pics, integrate gesture for quick interaction
Cons: Can only view a few photos at one time



Map View

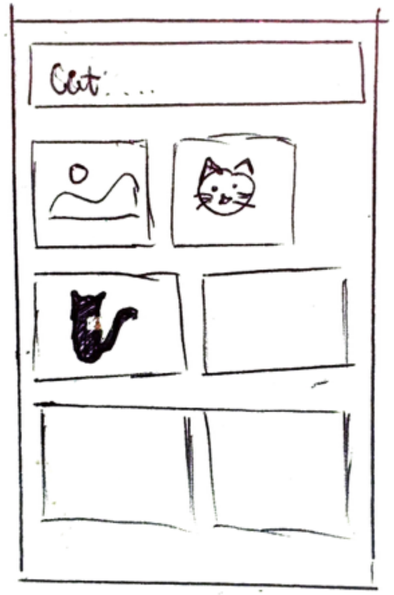
Pros: Photos are organized in map view providing better experience for users who like traveling
Cons: Can't view every photo with one glance

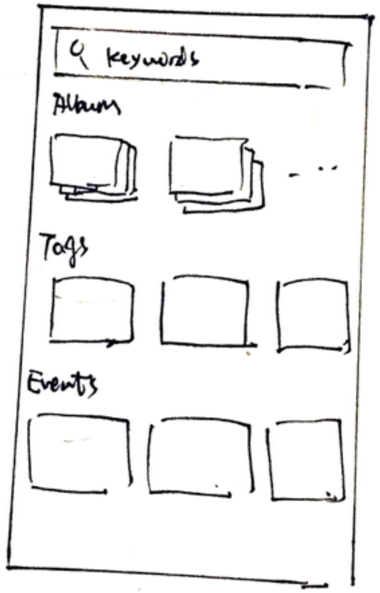


Time Order

Pros: Users are familiar with the UI pattern. they can find photos via time
Cons: Hard to find photos for user who took a lot photos

Initial Ideation - Search





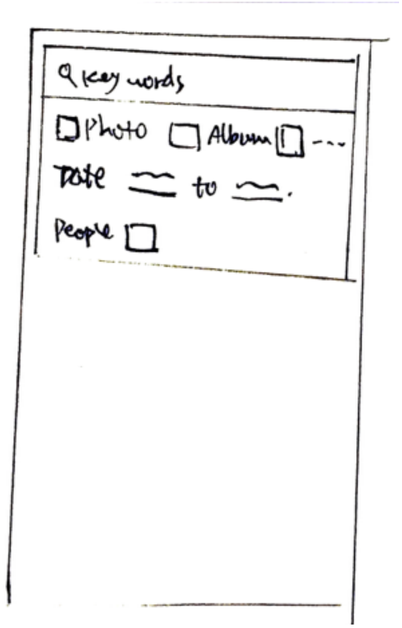


Image Search

Pros: Users can find subject easily by typing the word
Cons: Require accurate image recognition technology

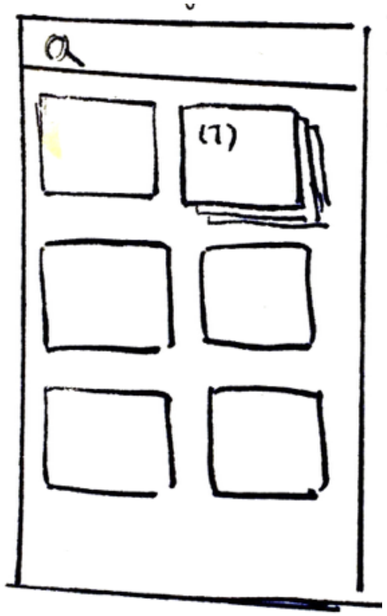
Show All Categories with Keywords

Pros: Search result is displayed in different categories, users can choose from the results
Cons: Users need to find the exact photo by themselves within each category

Specify Search Requirements

Pros: Users input type and time before search via keywords to get more accurate result
Cons: Users need to input more information

Initial Ideation - Organize



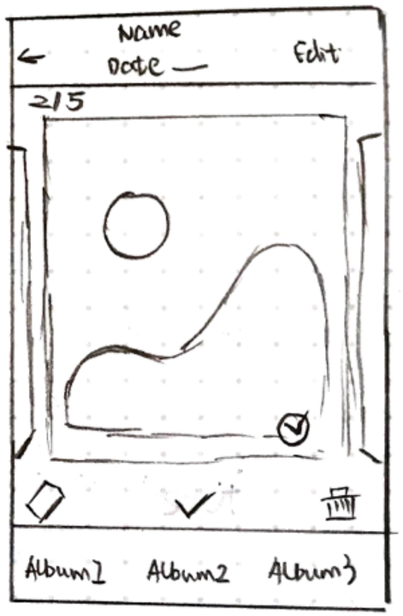
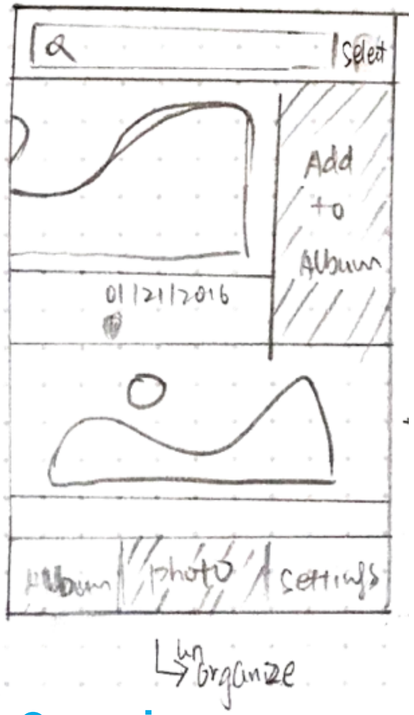


Photo Batch

Pros: Put similar photos together and users can select one or two from several photos

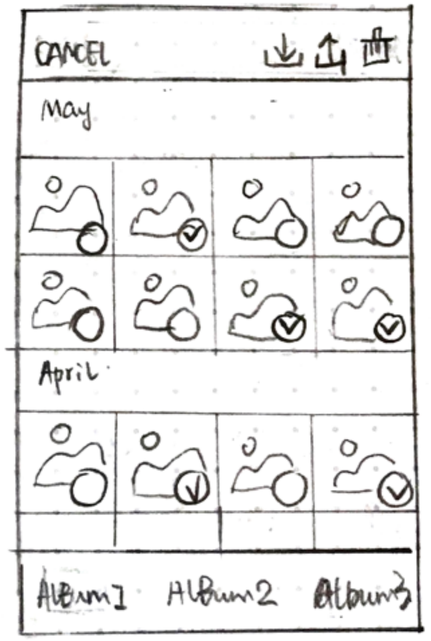
Cons: Require image recognition technology



Swipe to Organize

Pros: Users can swipe right to delete the photo and swipe left to add photo to an existing albums. Provide efficient interaction

Cons: Users can only control one photo each time



Select Mode

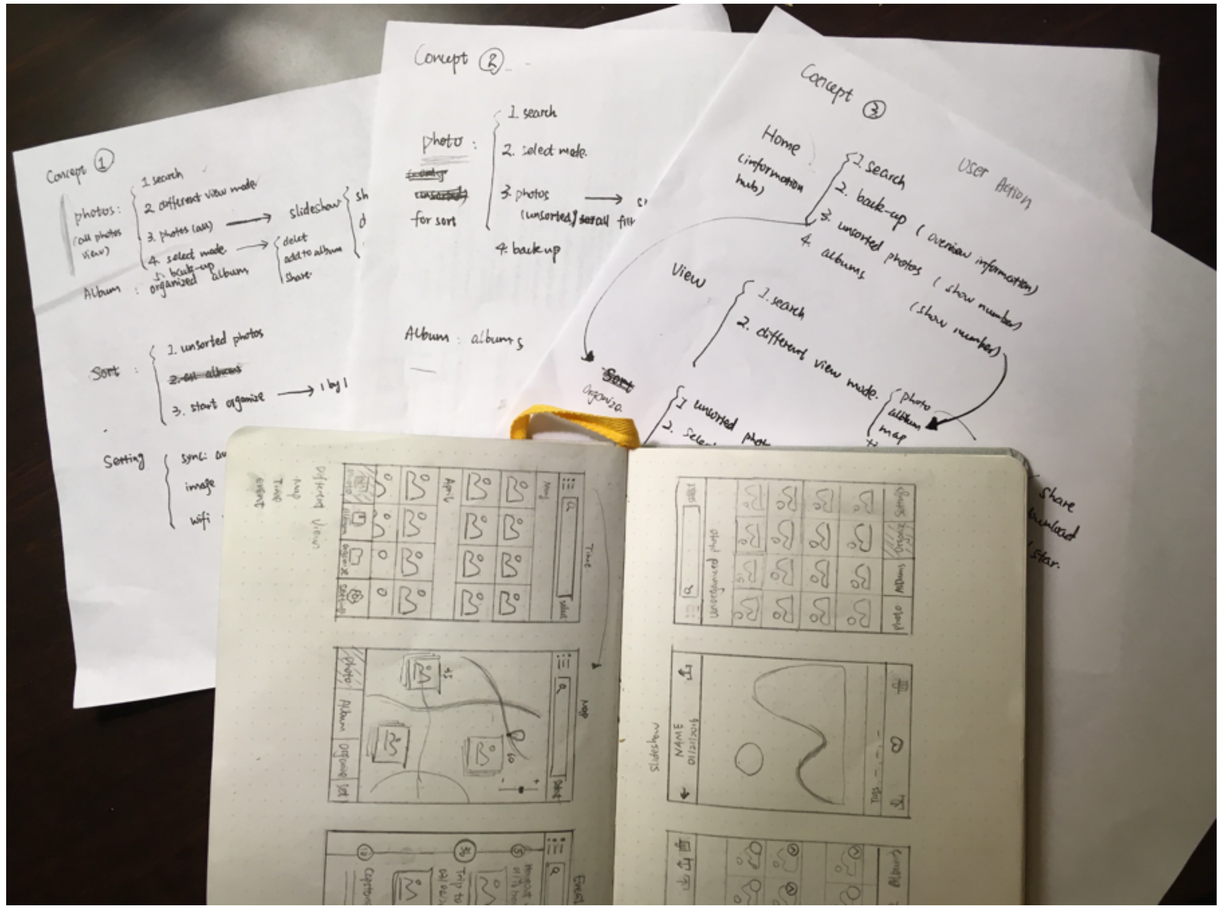
Pros: Users can select several photos tighter and add them to albums or delete. Users can control multiple photos at one time

Cons: Sometimes user still need to view the detail of photos via slideshow mode

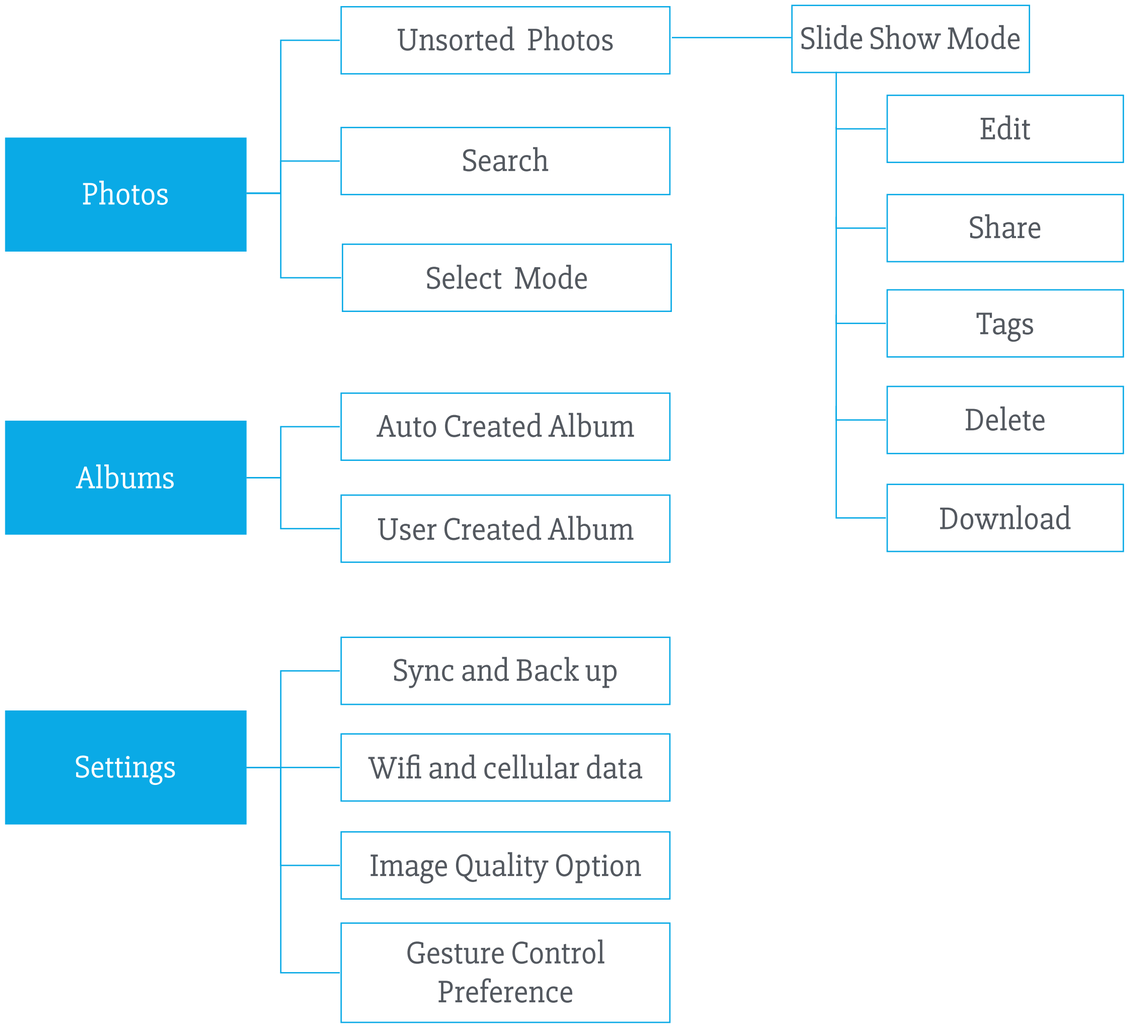
8

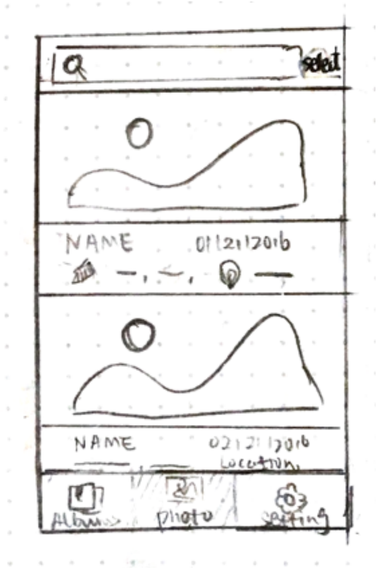
Content Mapping

With these ideas in mind, then I started to consider how these ideas can fit into the system. I created three different information architecture and sketched out key screens. In this way, I'm able to see how the ideas I came up can fit into different IA and what are the pros and cons of different system. Then I'm able to make paper prototype and do usability test



Content Mapping - Concept 1



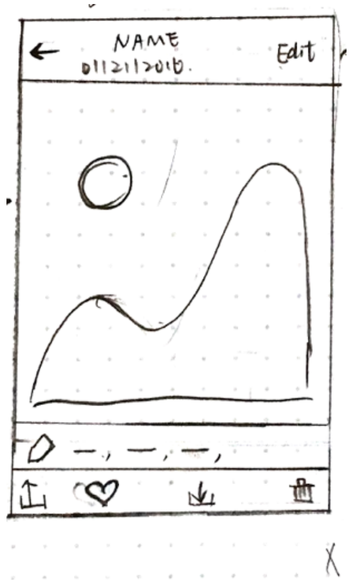


Unsorted Photos

In the photos tab, all unsorted photos will display here. Photo information includes name, tags, location and date. Users can organize photos using swipe gestures.

Albums

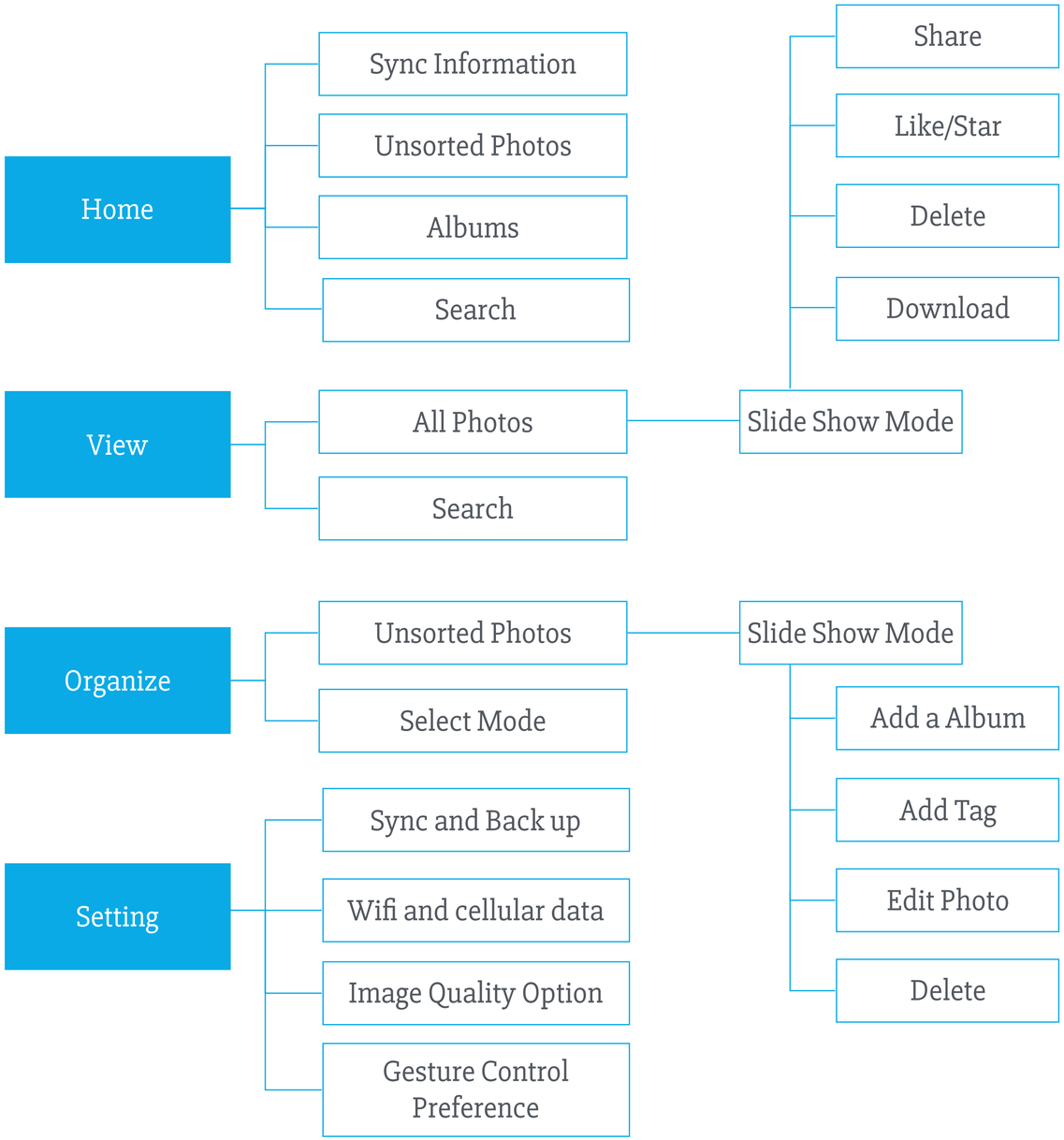
In the albums tap, users can view five thumbnail photos of each album.

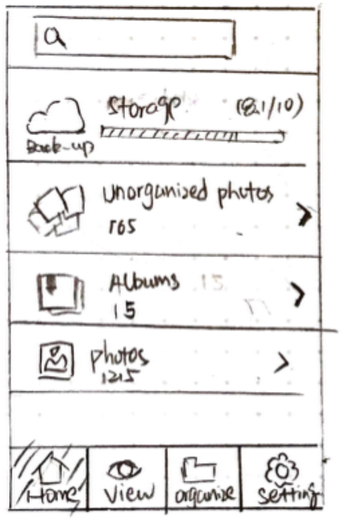


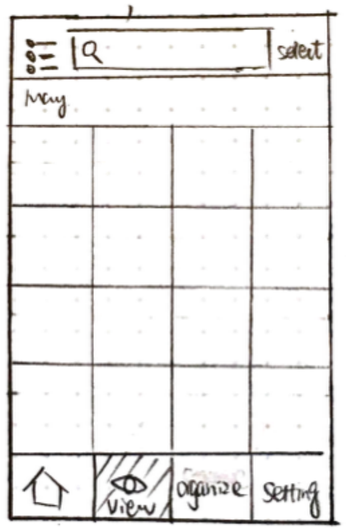
Slideshow Mode

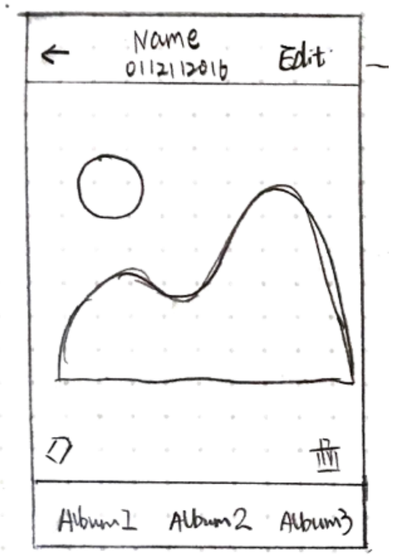
Users can share, like, delete and download the photo from cloud. By tapping “Edit”, users can edit the photo as well as the photos name and tags.

Content Mapping - Concept 2









Home

The Home tab is the information hub of the whole application. It shows back-up and storage information. How many albums and photos users have and how many unsorted photos left.

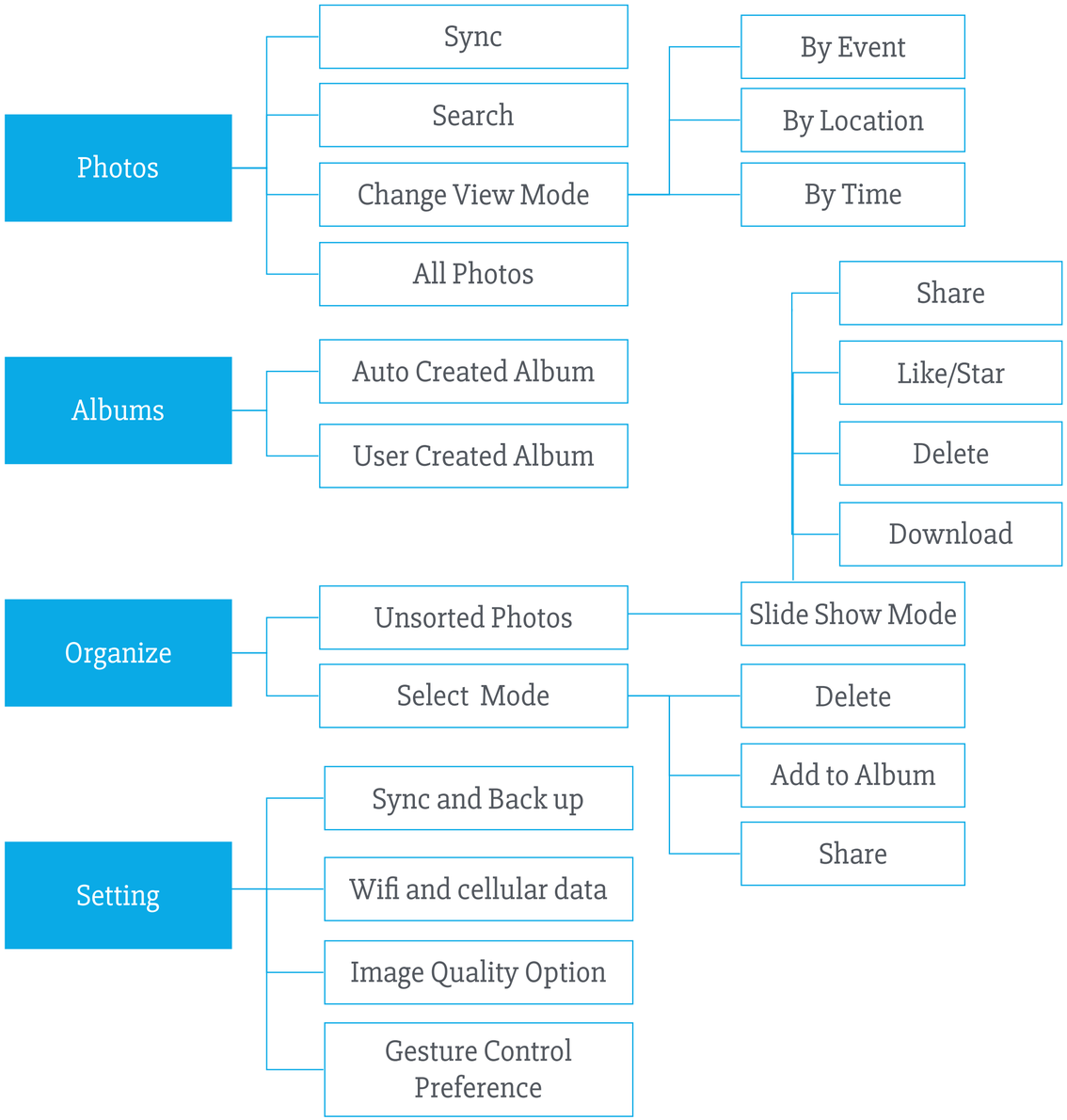
View

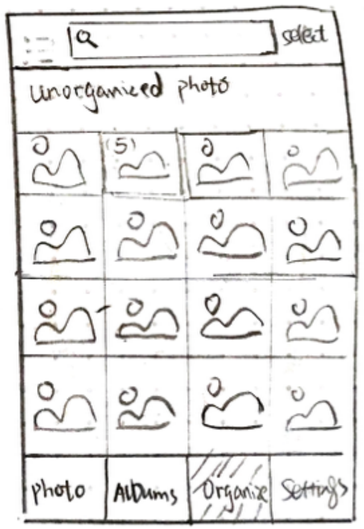
The View tab is mainly used for users to view and find photos. All photos will display here.

Organize Slideshow Mode

This page is designed for users to organize photos. Users can save this photo to albums simply by tapping album name. They can also add tags and edit photos.

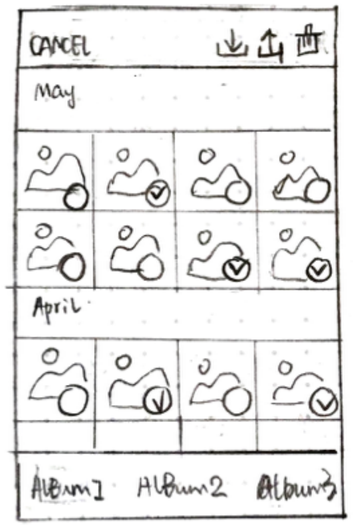
Content Mapping - Concept 3





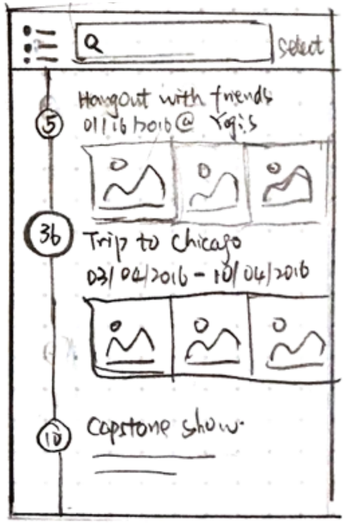
Organize

In the organize tab, all unsorted photo will be shown here and users can use select mode to organize several photos at one time by tapping the select button or long pressing photos



Select Mode

In the select mode, users can select several photos and organize them together. After select the photos, they can add the photos into albums, delete, share and download from cloud.



Timeline View

By tapping the button at the left corner, users will be able to change different mode. In this view, photos from same event will be organize together (event information can be got from calendar)

SECOND ROUND IDEATION

Design Iteration

9

Design Feedback

After I had three concepts and sketches, I made paper prototypes and did quick test with users to get feedback about my design. Then I'm able to understand what kind of information architecture makes more sense to users and what which UI provides better experience for users.

Key Findings:

1. The participant likes to user gestures to organize photos they agreed that it is efficient. But it not so intuitive at first, so it is necessary to provide other interactions
2. The organization tab is clear and easy to find when users need to organize photo and participant would like to have a tab show all the photos
3. IA of Concept 3 works better than the other two concepts.

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Final Design Highlights

According to the feedback from the quick test, I iterated both the information architecture and UI design based on concept 3.

Use Gesture for Efficient Photos Organization

Use swipe and long press to delete and select photo so that users don't need to enter the slideshow mode. Users also have the flexibility to customize their own gesture preference to boost their own flow.

Different View for Different User Needs

Provide users the ability to change between different view so that users can use the proper one to meet their own need.

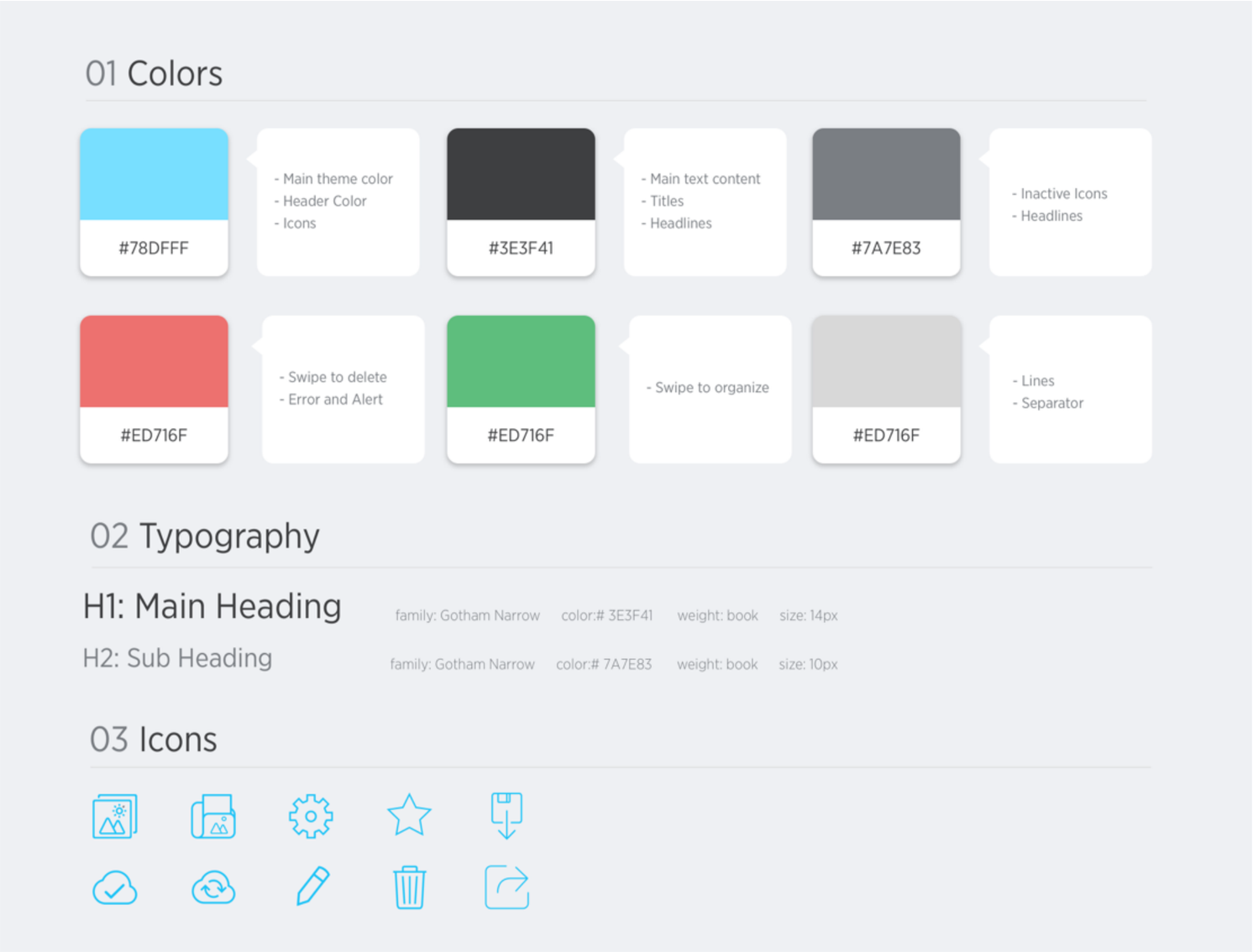
Clear Information Architecture

Separate unsorted photos from all photos then users can know what are the "tasks" they need to focus on without losing themselves in hundreds of unrelated photos.

11

Visual Design

I considered this applications a complementary product of Course Hero so I still use blue as the primary color. I made some adjustment of colors to create a minimal and delightful experience.



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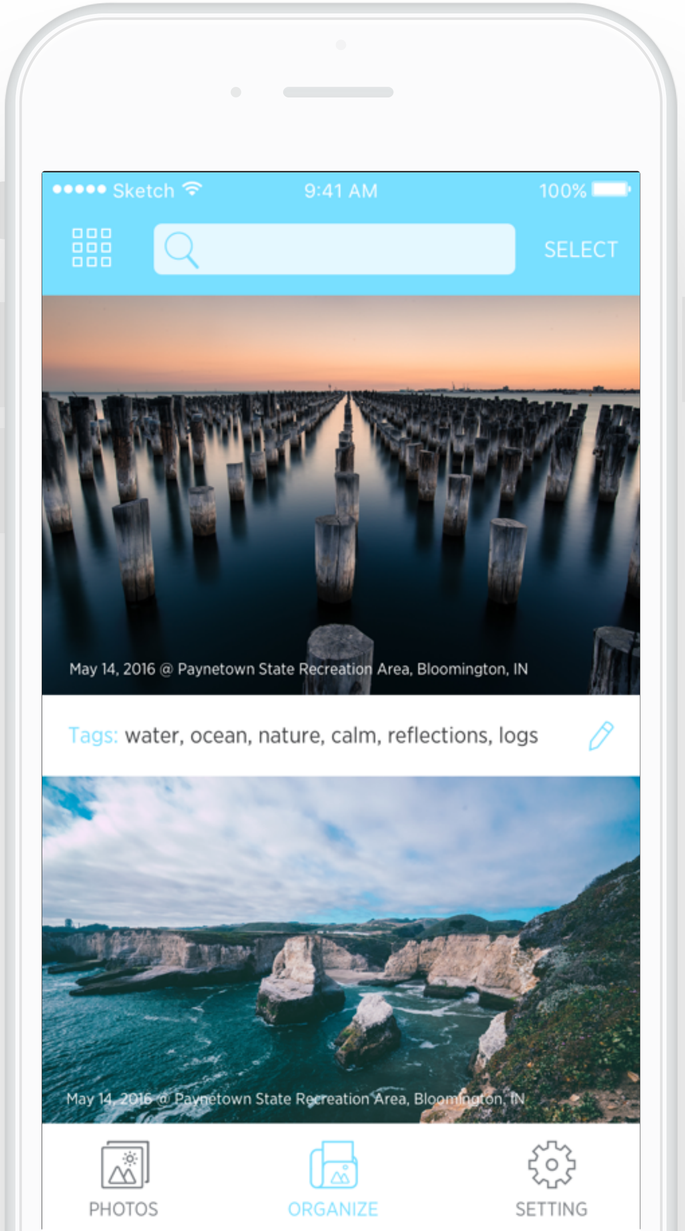
Prototype

Making prototype is important during the design process. Making prototype help me to think and iterate on details of the UI and user flow. On the other hand, prototype is also a great tool to test ad communicate with others.

Try the clickable prototype via this link https://marvelapp.com/e22jc2



FINAL DESIGN

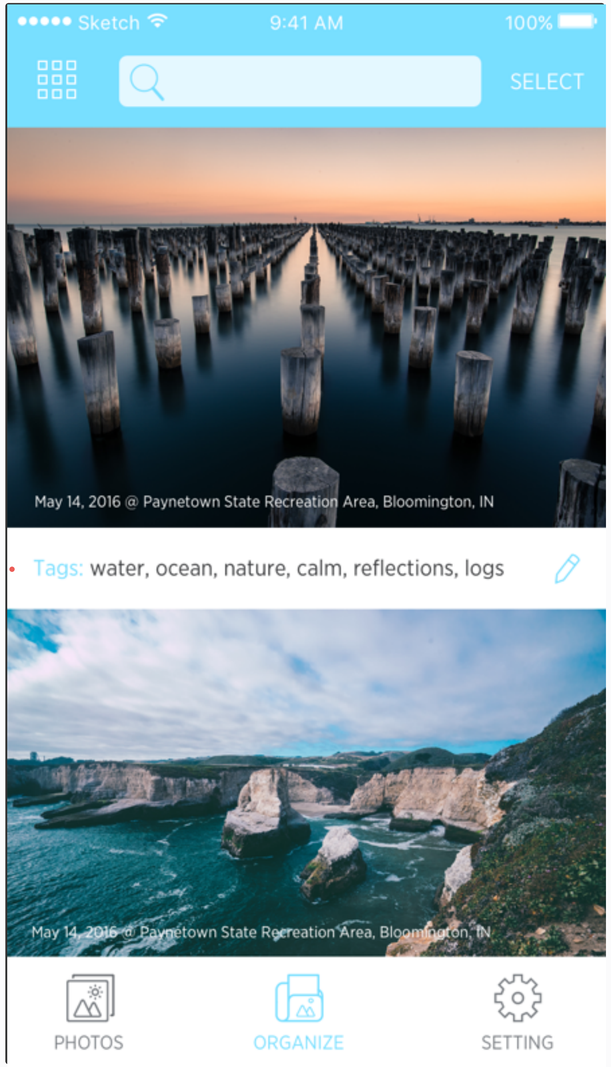
Design Walkthrough

Design Walkthrough

ORGANIZE TAB

In the organization tab, all unsorted photo will show here so that users can start organizing. For pro users, most of time their photos have very subtle differences. Displaying photos in this way will enable users view details of their photos and decide how to organize photos

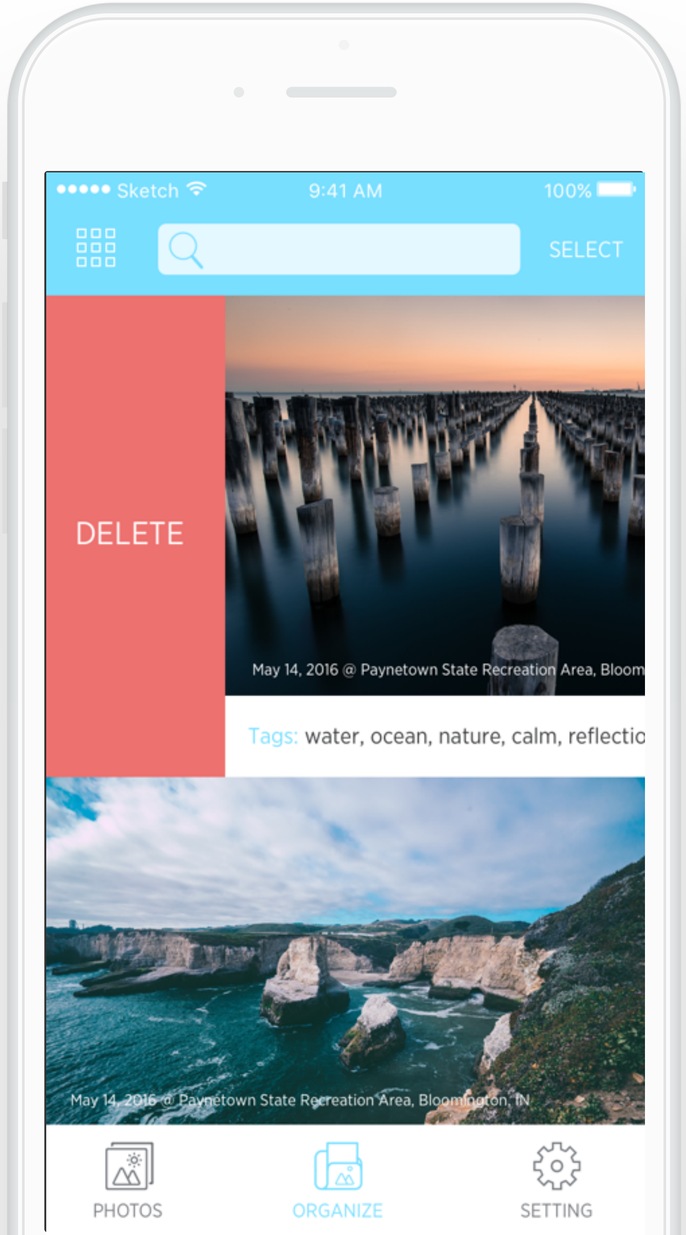
View tags directly here and users can edit tags by clicking the pencil icon



Design Walkthrough

DELETE THROUGH GESTURE

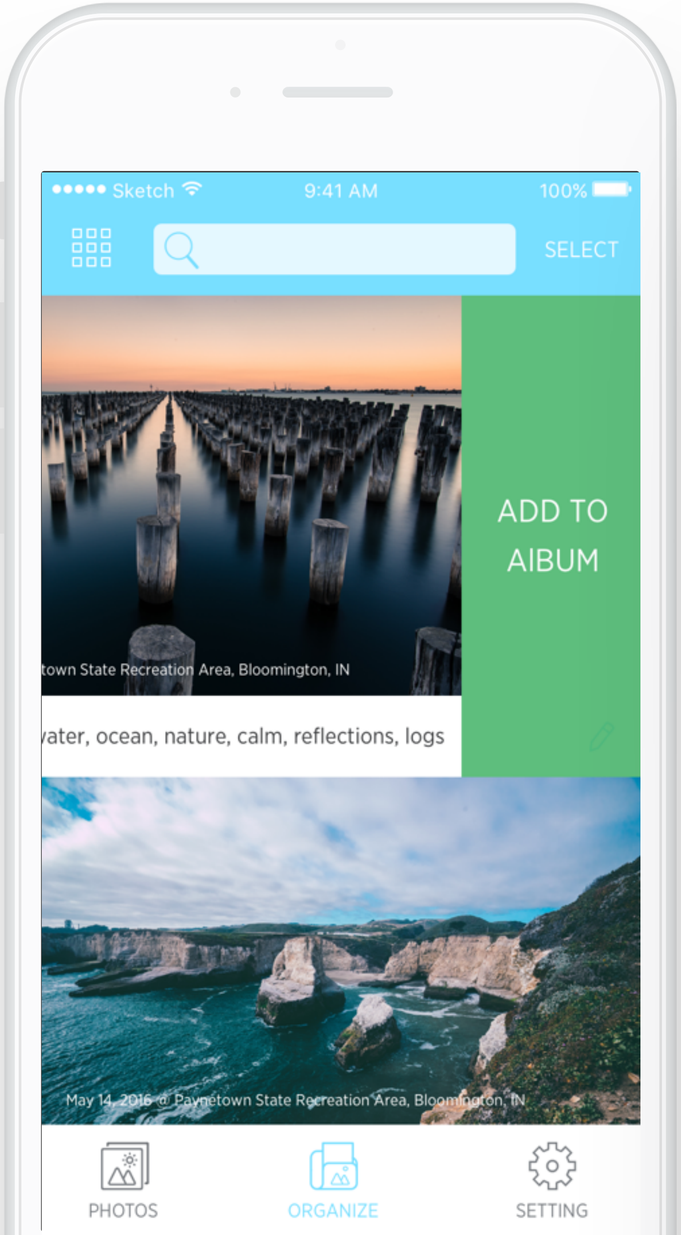
Users can simply delete the photos they don't want by swiping right

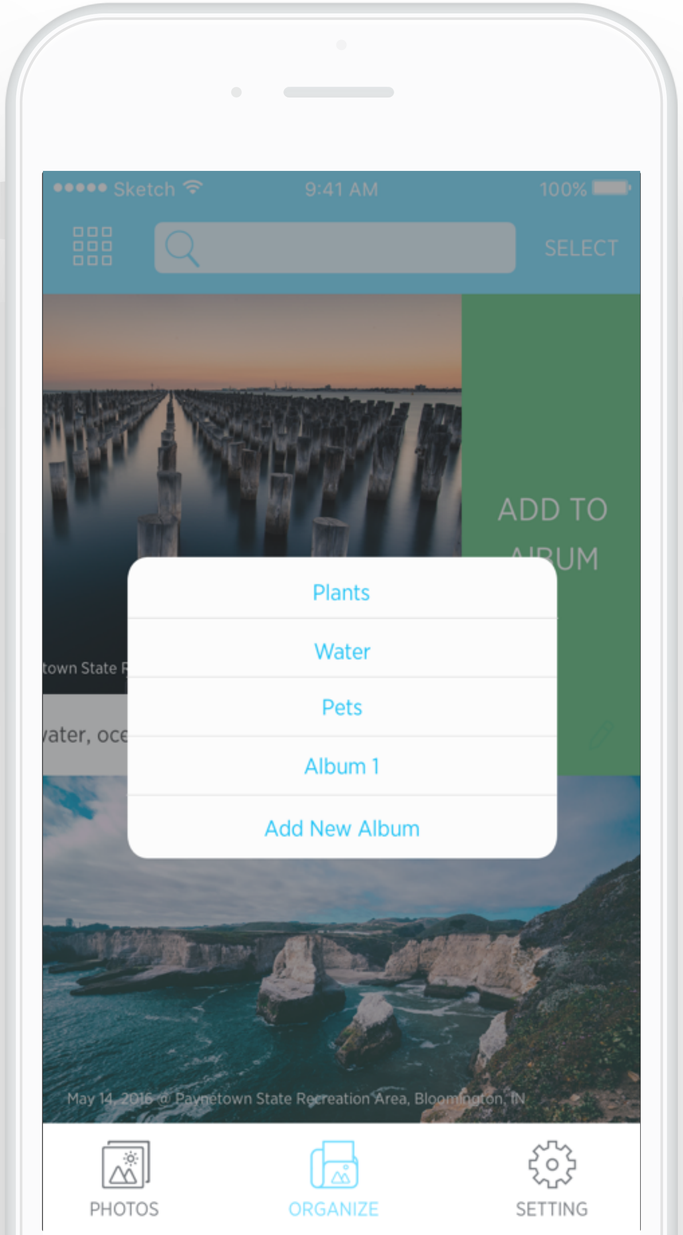


Design Walkthrough

ADD TO ALUBM

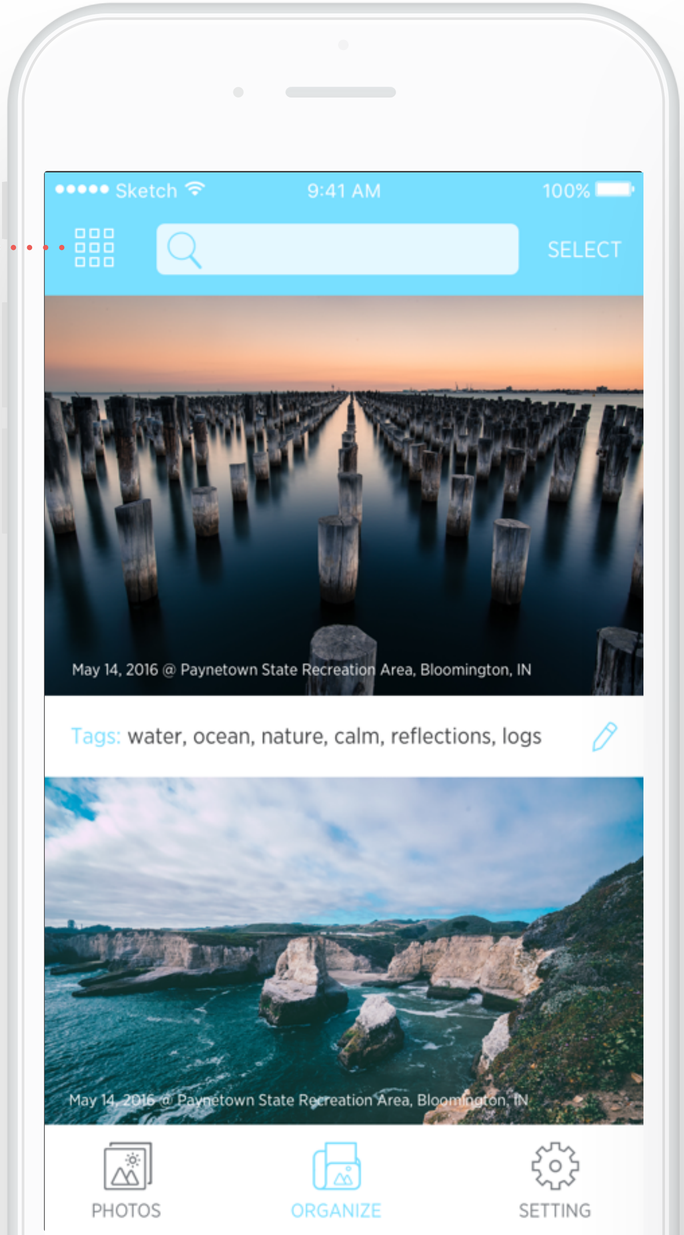
By swiping light, users will be able to add the photos into albums. A list of albums will pop up after users swipe left then users can choose one from the list or create a new one

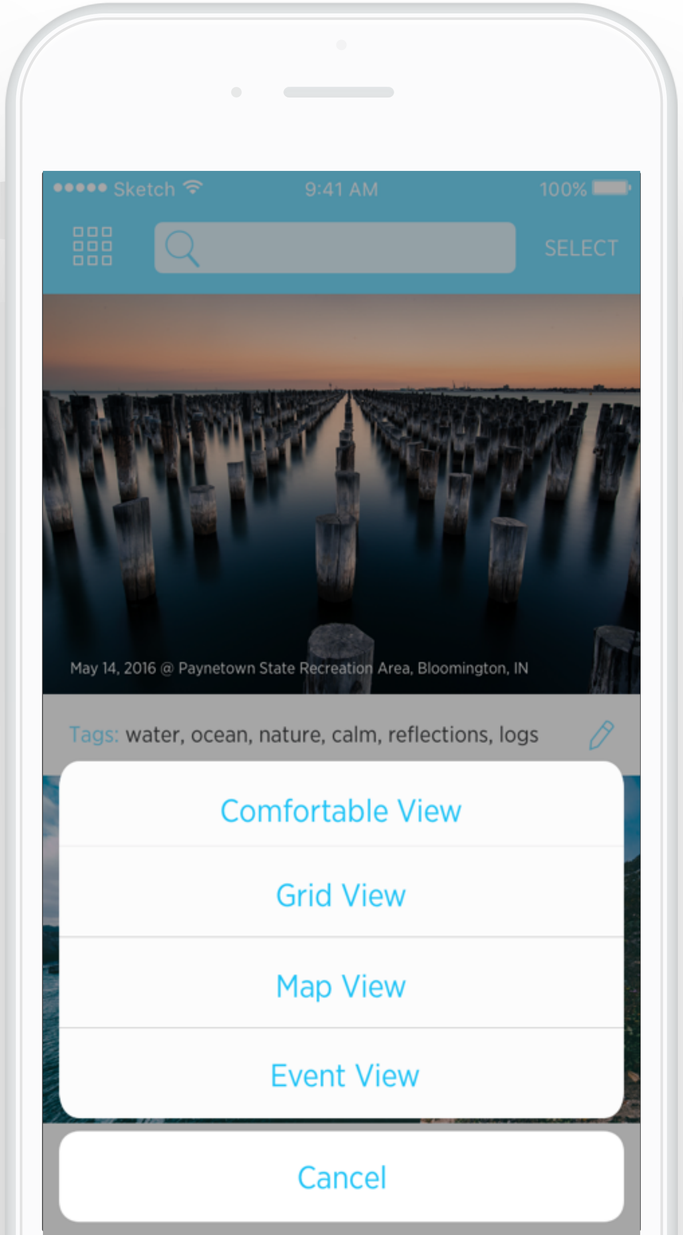




Design Walkthrough

Users can switch between different view mode





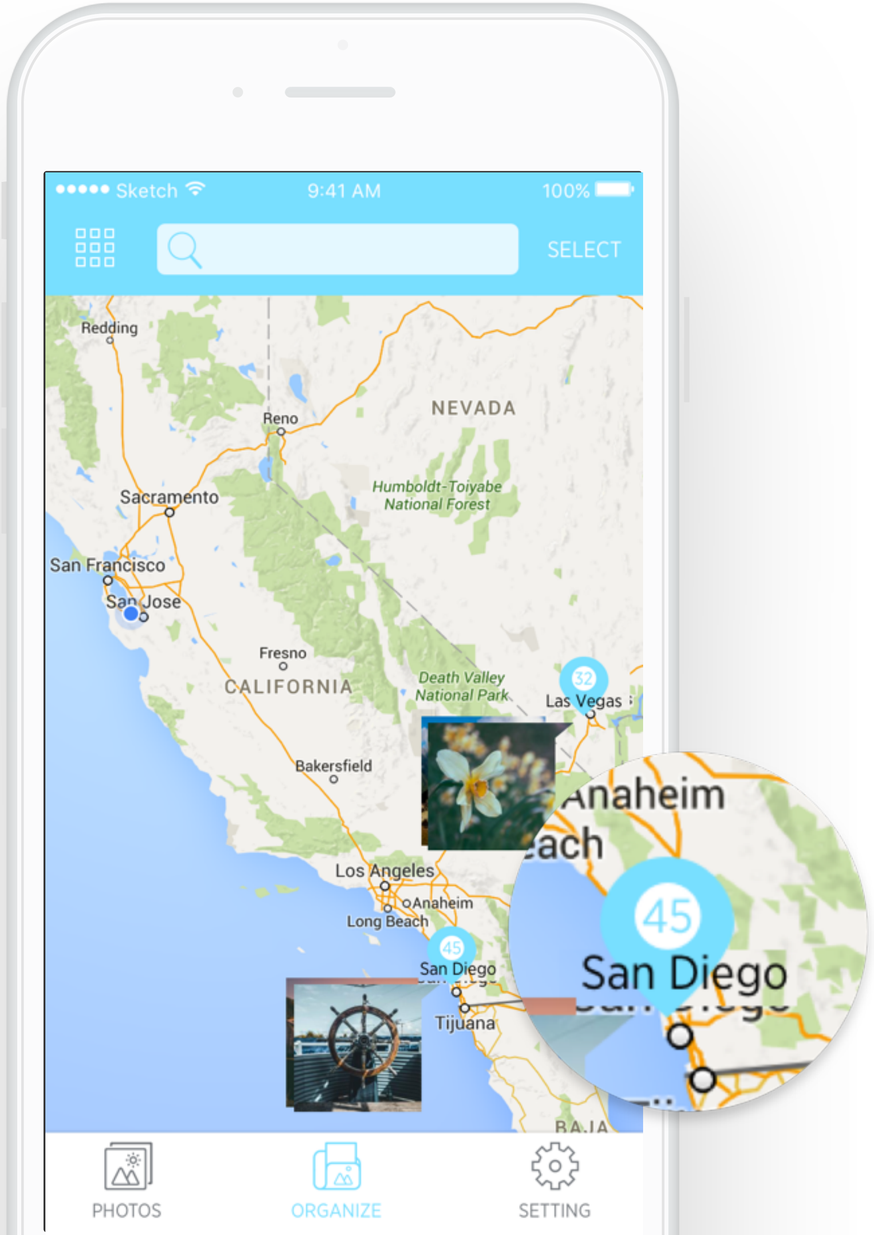
DIFFERENT VIEW MODE FOR DIFFERENT NEEDS

The application can provide four different view for different user needs. The default comfortable view, traditional grid view, map view for travelers and event view for users who took photos during event

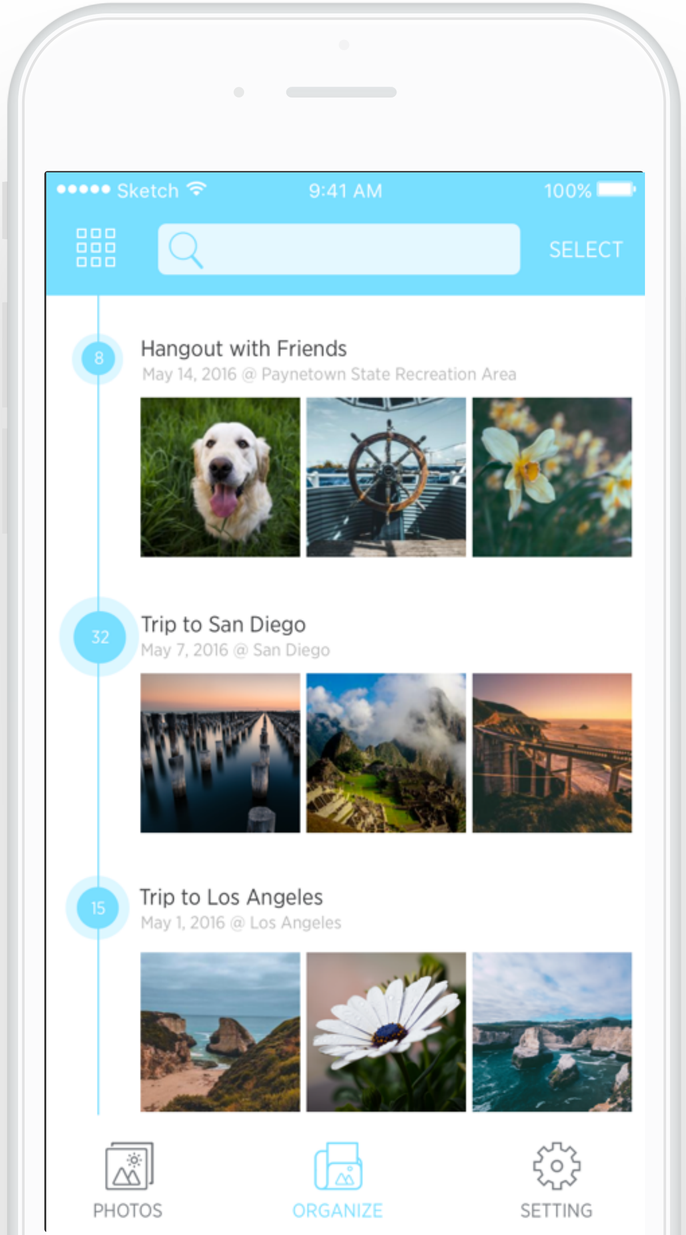
Design Walkthrough

MAP VIEW

For users who like traveling, map view can help them know where they have been and what photos they took during the trip. The number in the location icon means how many photos users took.



Design Walkthrough

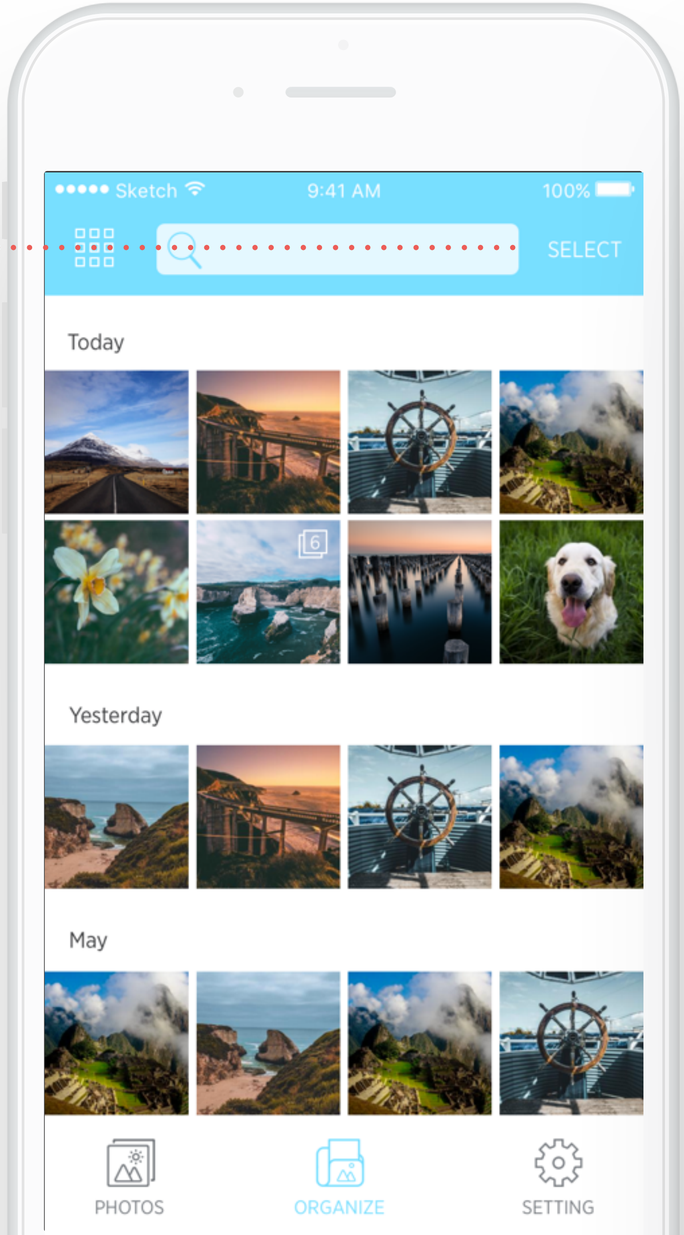


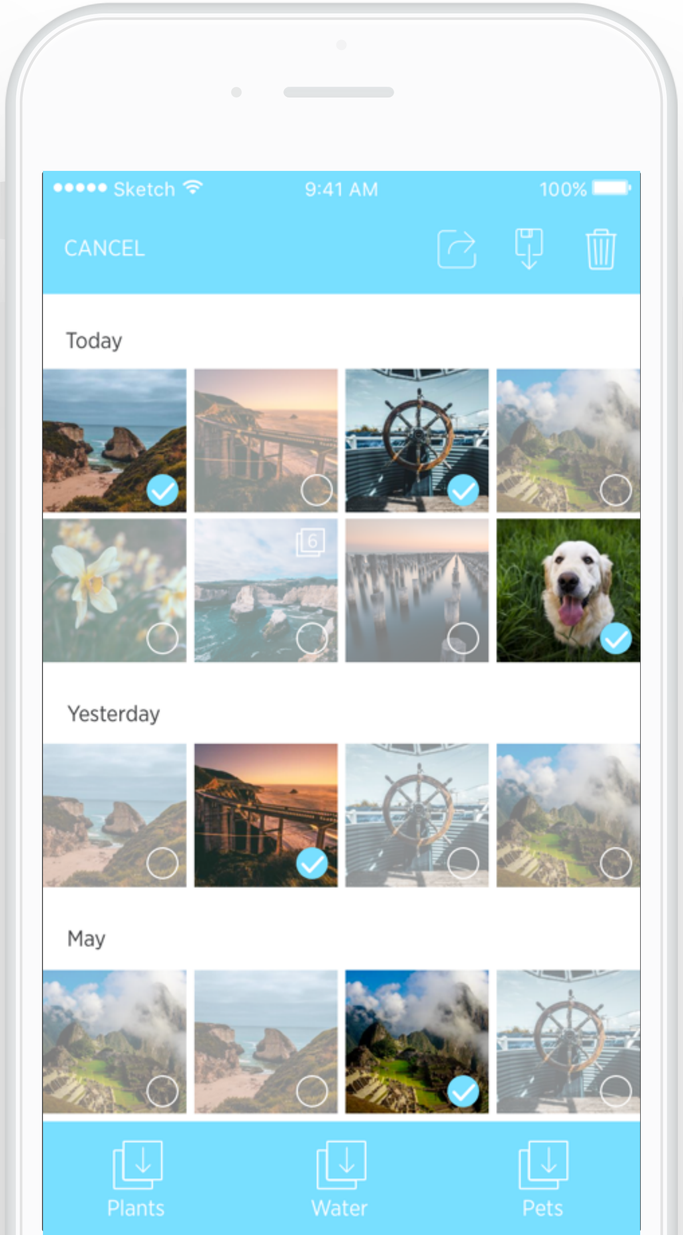
EVENT VIEW

Photos are organized according to the event users attended. (Event information can be found by connecting with users calendar). For users who like to take photos during event, they can find and share related photos with friends efficiently. Number in the circle and size of circle indicate how many photos include within the event

Design Walkthrough

Users can enter the select mode by tapping “SELECT” or long pressing photos





GRID VIEW AND SELECT

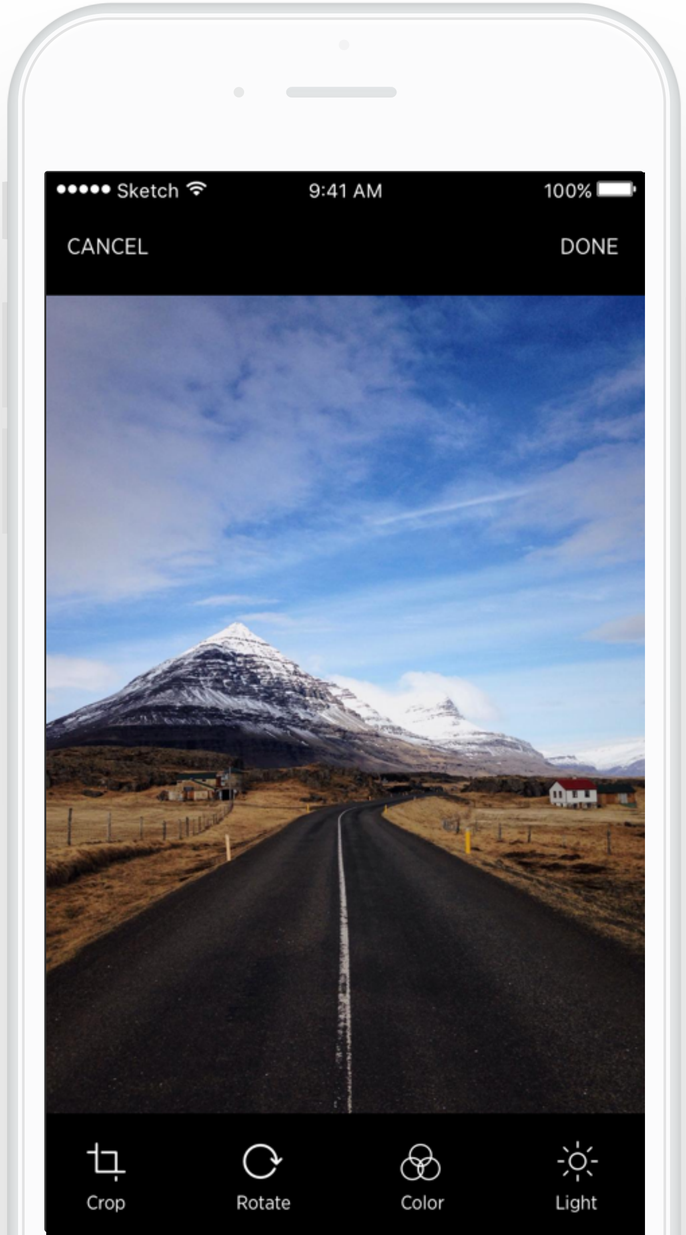
Grid View is efficient to organize several photo together. In select mode, users can select multiple photos, share, download, and delete at one time. Existing albums will display at the bottom of the page so that users can add these photos into albums at one time.

Design Walkthrough

SLIDESHOW MODE

In the slideshow mode, users are able to edit, share, delete photos and download it from cloud. Users can also “star” some of their good works so that they will be able to find these starred photo and print them.

Design Walkthrough



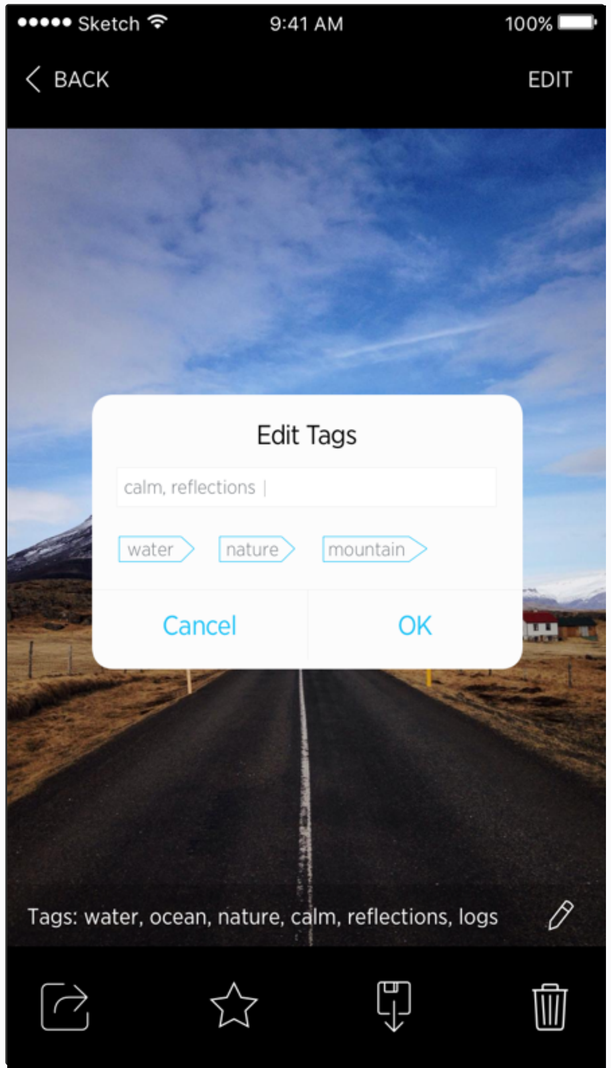
EDIT PHOTO

Users have basic tools to edit their photos like crop, rotate, adjust color and light. According the interview notes and my user research, pro users prefer to do some advanced editing using third party application (eg. Adobe Lightroom) on their computer, so my design didn't focus too much on photo editing.

Design Walkthrough

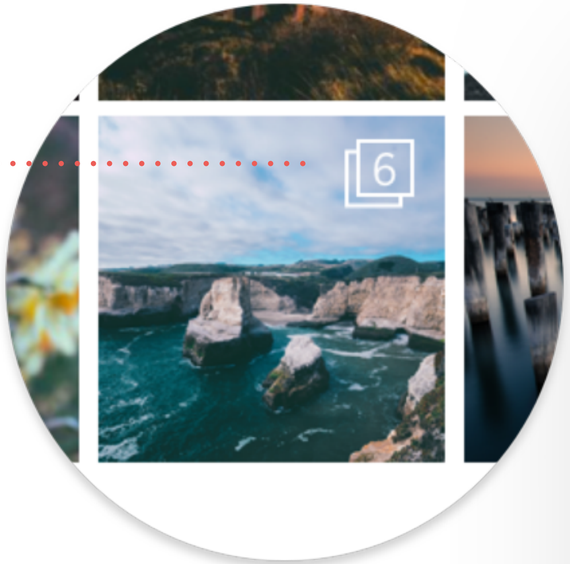
EDIT TAGS

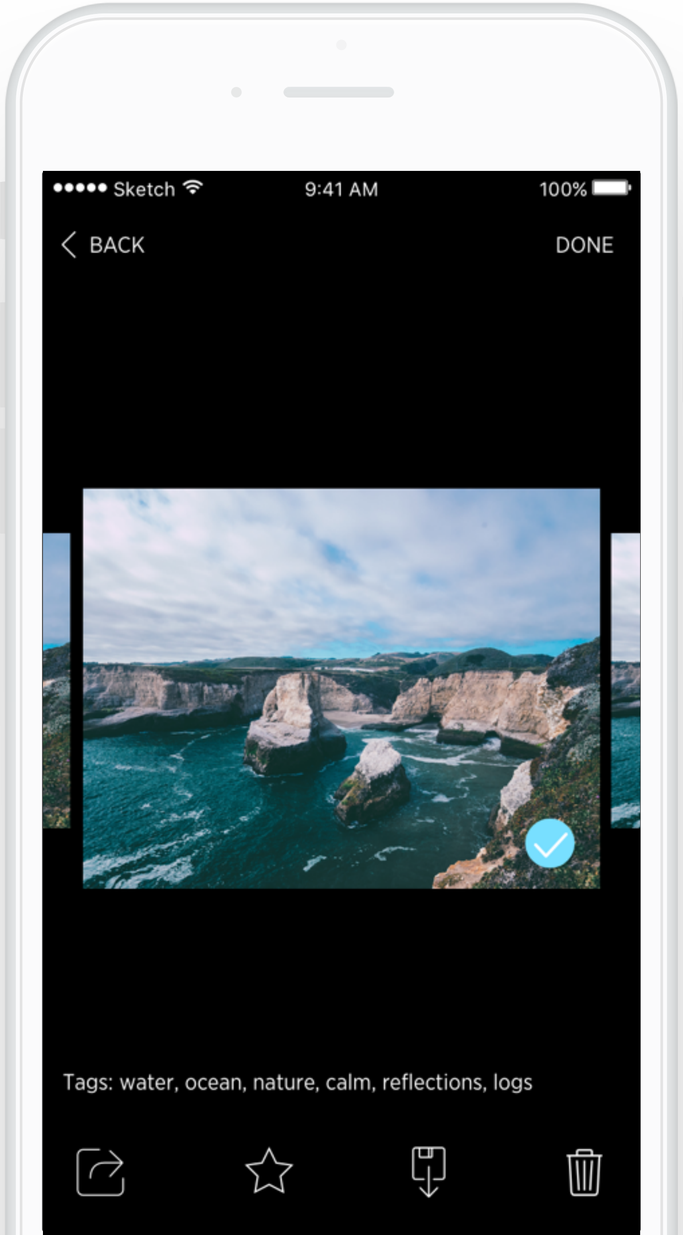
By tapping the pencil icon, users can edit and add tags. Users can see the mostly used tags and they can use them simply by tapping these tags.



Design Walkthrough

Icon for batch: indicates 6 similar photo are organize together.





BATCH

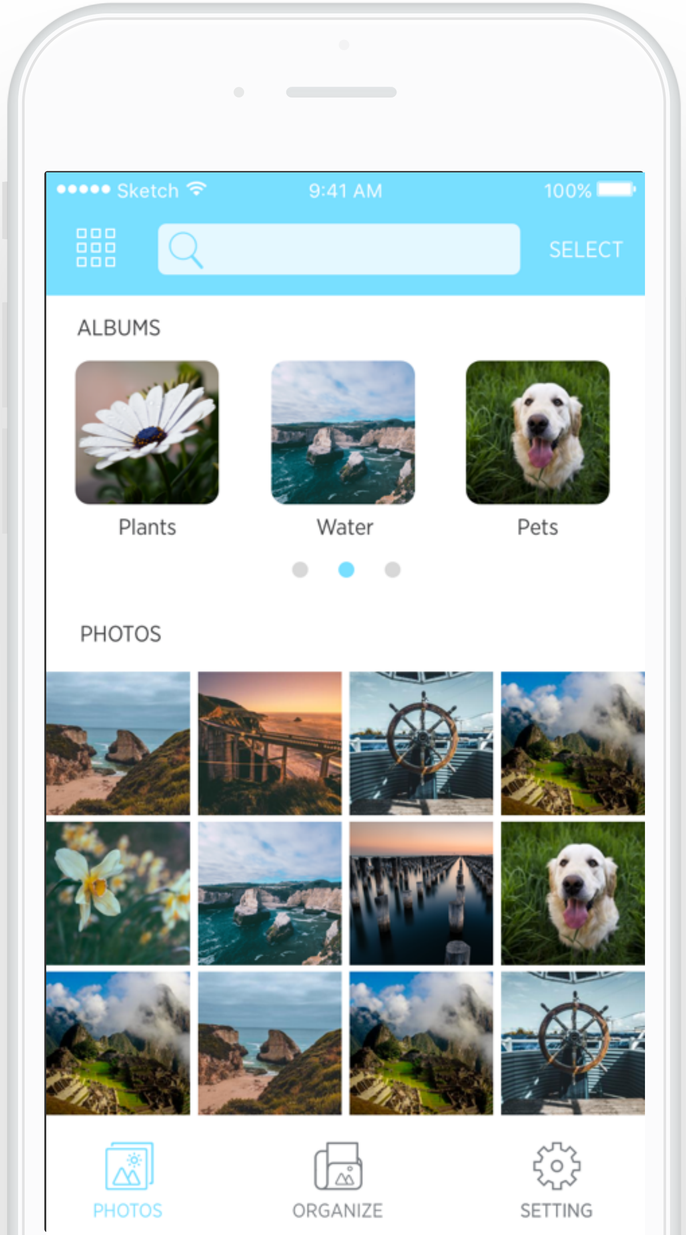
From user research, some users like to take several picture at one time and select one or two from them. The “batch” feature can help them do it efficiently. The similar photos will be combined and users can select one or two then tapping “Done”. The selected picture will be saved and other picture will be deleted.

Design Walkthrough

BACK UP

As mentioned in interview notes, backing up and sync between devices are important for most of users. The application provide auto back up from mobile every time users open the app. The icons at the right corner of the photo indicate the status of backing up. Considering the network connection and cellular data charge, users can set when to back up (use wifi or cellular data) in settings.

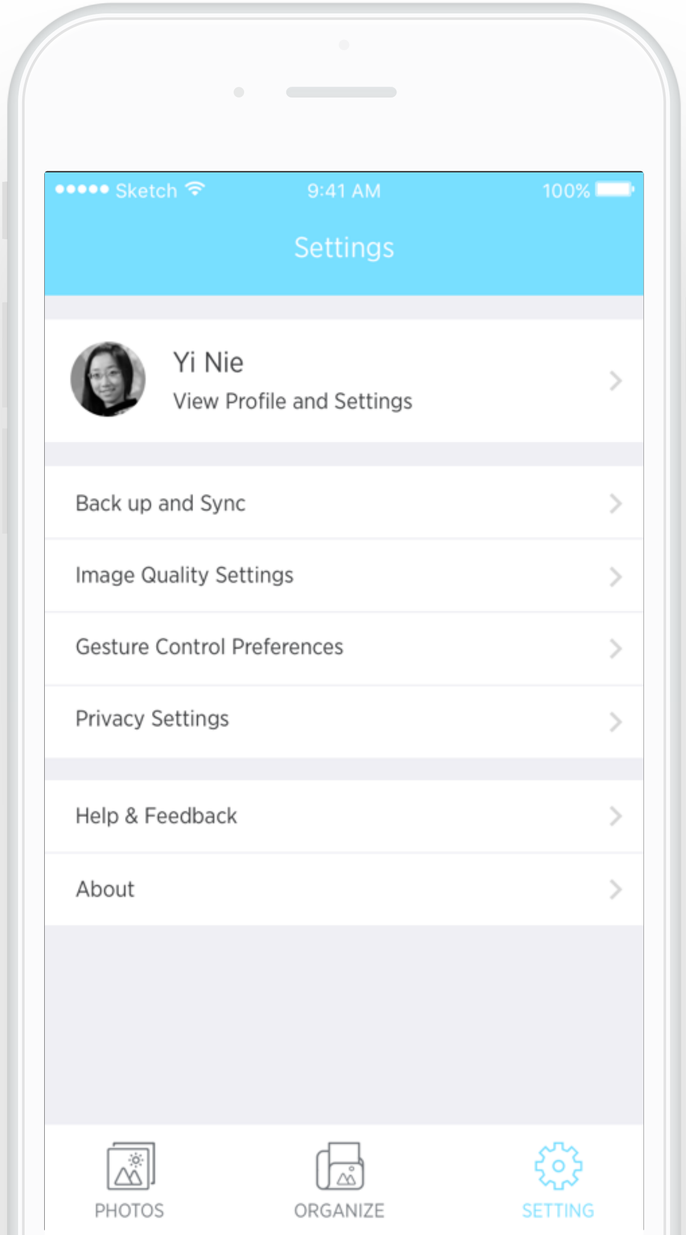
Design Walkthrough



PHOTOS

In the photos tab, users can view all the photos and albums. They can also change view mode and select multiple photo with same interaction.

Design Walkthrough



SETTINGS

In the setting page, user can set up whether they want to use cellular data to back up photos. Considering some photos are taken by DSLR and file size is large, users can set the image quality to view on mobile, which can influence the usage of cellular data and loading speed. Users can also set their own gesture preferences.

TEST

Continue the Iteration

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Usability Test Plan

Due to time limitation, I don't have time to conduct a formal usability test. But I included a brief test plan here to continue iterate on my design.

Prototype

Marvel: Clickable prototype. Test the App's IA and user flow

Participant

Ideally have different type of users test on this application eg. Pro users, basic users and powerful users. A screening survey could used to recruit proper participants.

Ask Questions and Assign Tasks

1. Delete one photo. Add one photo to the "Pet" Album
2. Switch to Grid View
3. Select photos with sea and water and put them into "Water" Albums
4. Add tags "mountain, road" to the photo
5. If you want to backup you photo only when wifi is available how would you do that

Observation

1. Observe how participant interact with the prototype and took notes
2. Encourage participants to think aloud
3. Pay attention to any movement, pause and hesitation

Post Interview

How do you feel about the overall experience?
What did you think when (according to notes and users reaction)?

Thank You!

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References

Photos used in Mock-ups

Stock snap: https://stocksnap.io/

Map used in Mock-ups

Google Map:https://maps.google.com/